REMARKS

This application has been reviewed in light of the Office Action dated December 20, 2004. Claims 1-23 are pending in this application, and have been amended to define more clearly what Applicants regard as their invention. Claims 1, 2, 6, and 7 are in independent form. Favorable reconsideration is requested.

The abstract has been amended as to matters of form, as required at paragraph 1 of the Office Action. Withdrawal of the objection to the specification is respectfully requested.

Claim 20 was objected to under 37 C.F.R. § 1.75(c) as being in improper form. The Office Action states that a multiply dependent claim (e.g. Claims 18 and 19) cannot serve as the base claim of another multiply dependent claim (e.g. Claim 20). Claim 20 has been amended to depend only from Claim 18. Withdrawal of the objection to Claim 20 is respectfully requested.

Claim 1 was rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent 6,529,631 to Peterson et al. Claims 2-23 were rejected under 35 U.S.C. § 103(a) as being obvious from Peterson et al.

Independent Claim 1 is directed to a method of transmitting blocks of data in which, for at least one of the blocks of data, at least one parameter associated with the at least one block of data is transmitted. The parameter represents the relative importance of the block of data associated with the parameter within a message transmitted by all the blocks of data. The data is coded by a channel coding method which does not take into account the parameter.

Notably, Claim 1 recites that a parameter associated with a block of data and representing the relative importance of this block among all the blocks of data is transmitted, and the data is coded by a channel coding method which does not take into account this parameter.

Peterson, as understood by Applicants, relates to optimizing encoding and performing automated steerable image compression in an image coding system using a perceptual metric. Peterson et al. discusses the need for dynamically adjusting the image encoding parameters in accordance with a perceptual metric, and automatically performing steerable image compression such that an image is optimally encoded with regard to how the human visual system observes the image, i.e. with regard to perceptual image fidelity (see column 2, lines 37-43).

In Fig. 1 of Peterson, an image encoder system 100 contains an image encoder 104, an encoder parameter selector 108, and a perceptual fidelity metric generator 112. The image encoder 104 may be, for example, a block-based image encoder operating in accordance with an MPEG standard, and the encoding parameters may be, for example, encoder quantization scales. (See column 3, line 38 to column 4, line 2.)

As mentioned at column 2, lines 46-56, and column 4, lines 3-47, of Peterson et al., encoder quantization scales are selected as a result of comparing an original image to a reconstructed image and processing the comparison results using a quantitative perceptual difference metric. This metric represents the "fidelity" of the reconstructed image and is used to update the encoding parameters (encoder quantization scales) to optimize the coding of the image.

In Fig. 7 of Peterson et al., a flow diagram of a user steerable image compression routine 700 makes use of a fidelity map generated at step 704 and an importance map generated at step 714. As mentioned at (1) column 2, line 56, to column 3, line 4, and (2) column 10, line 34, to column 12, line 28, the encoder generates the fidelity map representing the video fidelity of each pixel (or pixel block) within the video. On the other hand, the importance map is made on a frame by frame basis as a user observes the original image sequence and, for each frame, the user outlines the regions of most importance and each region can be allotted a particular importance level, such that the most important region is to be encoded with the most fidelity while the least important region is to be encoded with the least fidelity possible.

As mentioned at column 10, lines 59-65, and column 11, lines 26-64, of Peterson et al., the fidelity map and the importance map are compared on a block by block basis (Fig. 7) to determine whether the encoder has appropriately allocated encoded bits in the present image so as to generate a fidelity metric for each block that corresponds to the importance of those blocks. Therefore, apparently the encoding parameter (e.g., quantization scale) of each block is changed to reflect the block's importance. Column 11, lines 26-64, of Peterson et al. discusses that when the fidelity map and the importance map do not match to a satisfactory degree, the system adjusts the encoding parameters (quantization scales) and re-encodes the input image.

The encoding process of Peterson et al. generates another fidelity map which is then compared to the importance map to determine the degree to which the two maps match. This iterative process adjusts the encoding parameters until the fidelity and

the importance maps match to a substantial degree. Thus, the encoded image has certain regions that are encoded to a high fidelity and certain regions that are encoded to a lower fidelity, as specified by the importance map (see column 2, line 57, to column 3, line 4).

Applicants have found no teaching or suggestion in Peterson et al. of a parameter associated with a block of data, and which represents the relative importance of the block of data among the other blocks of data to be transmitted, as recited in Claim 1.

As noted above, in Peterson et al. the blocks of data are coded as a function of the importance of these blocks of data. That is because the encoding parameters are adjusted based on the comparison between the fidelity and importance maps. That does not suggest a method in which, as recited in Claim 1, the coding of the block of data is effected without taking into account its relative importance among all the blocks of data to be transmitted.

Furthermore, Peterson et al. refers to a source encoding method (for instance the image compression under MPEG-2 format) but does not teach or suggest a channel coding method as recited in Claim 1.

Moreover, Peterson et al. encodes an image by using encoding parameters which are adjusted based on a comparison result between an importance map and a fidelity map. However, none of the parameters and the maps are transmitted with the encoded image.

Nothing in Peterson et al. would teach or suggest that a parameter

associated with a block of data and representing the relative importance of this block among all the blocks of data is transmitted, and the data is coded by a channel coding method which does not take into account this parameter, as recited in Claim 1.

Accordingly, Claim 1 is believed to be clearly allowable over Peterson et al.

Independent Claim 2 recites features similar in many respects to those discussed above with respect to Claim 1. For example, Claim 2 also recites that a parameter associated with a block of data and representing the relative importance of this block among all the blocks of data is transmitted, and data is coded by a channel coding method which does not take into account this parameter. Therefore, Claim 2 is also believed to be patentable over Peterson et al. for at least the reasons discussed above.

Independent Claim 6 is directed to a method of transmitting blocks of data which have been coded by a channel coding method compatible with an iterative decoding. For at least one of the blocks of data, at least one parameter associated with the at least one block of data is transmitted. The parameter indicates a minimum number of iterations to be applied by an iterative decoder during the decoding of the block of data associated with the parameter.

Notably, in Claim 6, blocks of data have been coded by a channel coding method compatible with an iterative decoding.

While Claim 6 makes use of a channel coding method for coding blocks of data, Peterson et al. only refers to a source encoding method such as the MPEG-2 compression format.

Furthermore, Peterson at most discusses iterative coding of data, but not

iterative decoding as recited in Claim 6. In Claim 6, blocks of data have been coded by a channel coding method compatible with an iterative decoding. Nothing in Peterson et al. teaches or suggests this feature.

Accordingly, Claim 6 is believed to be clearly allowable over Peterson et al.

Independent Claim 7 recites features similar in many respects to those discussed above with respect to Claim 6 and therefore is also believed to be patentable over Peterson et al. for at least the reasons discussed above.

A review of the other art of record has failed to reveal anything which, in Applicants' opinion, would remedy the deficiencies of the art discussed above, as a reference against the independent claims herein. Those claims are therefore believed patentable over the art of record.

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

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